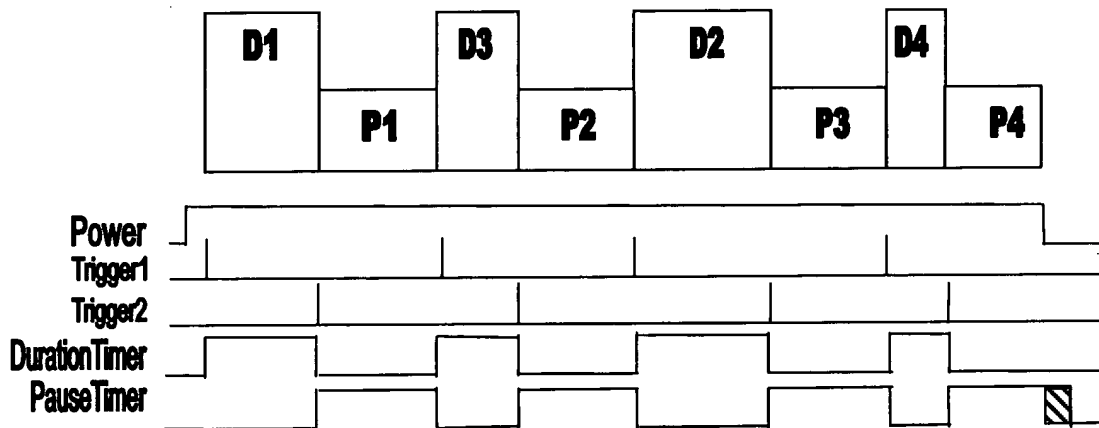
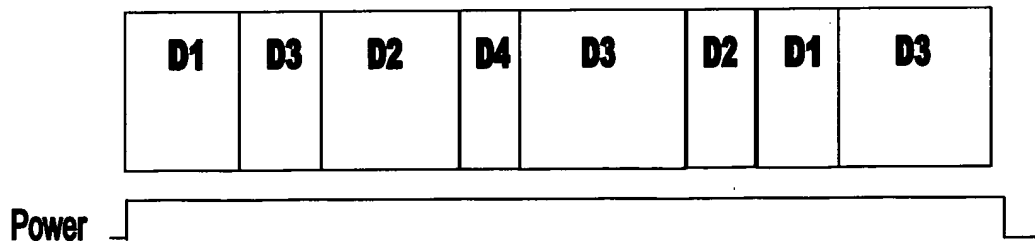


The following diagram illustrate some key differences between the device of Elstein et al and that of the present application. The top part of each figure shows the signals that are presented by the device (or absence thereof), and the bottom part shows the interaction of the user with the device, either during use (power, triggers) or by setting fixed length timers (duration, pause).

Elstein et al.



Present Application



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In these diagrams **D1-D4** represent four states displayed by each device which corresponds to an action the athlete is to make immediately (Elstein) or a change in the athletic environment (present application). Once power is applied the device of Elstein emits a series of these states interspersed with pause intervals **P1-P4**, during which the athlete repositions back to "start". The duration of the pause intervals **P** and the state displays **D** are either determined by external triggers (in some implementations) or predetermined (and fixed) by the program being run. Timer controlled durations will be of exactly the same length on every repetition of a particular drill. Elstein presents many preferred implementations and external triggers and/or predetermined intervals are employed in all of them. None of the implementations of Elstein et al is truly unpredictable in both the order and duration of state displays **D**. In some cases the athlete can learn the durations from running the same drills over and over, and in others they know when the state will change because they trigger that event themselves

Once turned on the present device displays a series of states, randomly varying in order and duration, without interruption, until such time as it is turned off. Since there are no pause intervals **P** it provides no mechanism for generating them. There are no fixed duration timers and there are no external triggers. The series of states displayed is determined instead by the mean transition frequency, the minimum hold time, and the four state occupancy values. Unlike the device of Elstein et al, the state which is represented by all lights off does not represent a pause, or no signal, it is just another state

which may be interpreted by the athlete in accordance with whichever meanings he has chosen to associate with each of the four states of the present device. The random number generator in the controller takes care of the rest and emits a series of states with duration and frequency of appearance consistent with these controlling values. Neither the duration nor the sequence of states displayed can be predicted by the user of the device no matter how long they observe its output. Within the limits of the randomness of the random number generator the device's output is truly unpredictable by the athlete using it.

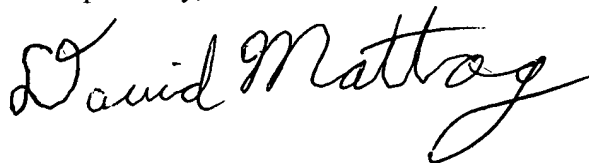
An expanded example of the use of the present device will perhaps help clarify things. In soccer a player dribbling the ball up the field towards the goal typically has to get around an opposing player. During a game when the player with the ball approaches a second player he must constantly assess the changing situation and decide whether to go right, left, wait, kick the ball to another player, or so forth. This is a dynamic process, the state of the game changes continuously. In typical soccer training when alone players now set up a series of cones and pass the ball right on the first cone, left on the second and so forth. This type of training is static and a simple plastic cone is a poor substitute for an opposing player. The present device attempts to better simulate an opposing player. As the athlete dribbles towards it the device of the present application flashes state information which simulates the feints of an opposing player. The player with the ball sees at one time that going right is best, later, that going left would be better, and perhaps later still that passing on neither side is possible. As in a real game the player

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dribbling the ball must constantly assess the situation and be prepared to respond to the current state when he finally gets close enough to the device to actually pass the ball around it. The device, on the other hand, is completely oblivious to the existence of the player and just runs along in accordance with the timing parameters which control the manner in which it randomly and continuously changes state. It does this in such a way that no matter how often the player trains with the present device he will not be able to predict the time of the transition to the next state, nor the identity of that state. That is, it simulates a completely inscrutable opponent.

The draft amended claims which precede these remarks attempt once again to distinguish between the present device and that of Elstein et al. and to illustrate the points made above. Making this distinction is complicated by the fact that some of the key differences are from features present in the device of Elstein et al which are not required nor provided by the present device, but of course the present claims cannot recite features which the device of the present application lacks. In brief, claim 45 of the previous response has been merged into the first claim 37. This required renumbering some of the claims from 46 on to reference claim 37 instead of claim 45.

Respectfully,

A handwritten signature in black ink that reads "David Mathog". The signature is written in a cursive, flowing style with a large, sweeping "D" and a long, trailing "g".

David Mathog
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Arcadia, CA 91006
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1. Participants in the telephone conversation were: Ross A. Williams, Xuan Thai, David Mathog, and Frederic Farina.
2. The applicant had previously faxed the proposed amendments and accompanying remarks presented here on **pages 2-10**.
3. The prior art discussed was Elstein et al., US 4,702,475.
4. The proposed amended **Claim 37** (**page 2**, above) was discussed.
5. The applicant submitted that the microprocessor implementations of the device of Elstein produced states which were not truly random in order, where the definition of “random” is “unpredictable”. The examiner disagreed, at least in part because the first time the partially random order was encountered its sequence, not having been seen before, could not be predicted.
6. The applicant submitted that the device of Elstein provided, and required for its use (so that the athlete might return to “start” before the next exercise), pauses between states (corresponding to particular training motions). The examiner disagreed, stating in particular that the pause times might all be zero.
7. The applicant submitted that the duration of the states of Elstein were either completely predictable (after one observation, in either the RC type timer embodiments or some microprocessor embodiments) or by knowing where the triggers that terminated states lay (in other embodiments). The examiner disagreed, at least in part because the duration was not predictable the first time a particular interval was encountered.

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8. No agreement was reached on modifications to the proposed draft amendments that would render the claims acceptable.

Regards,

A handwritten signature in black ink, reading "David Mathog". The signature is written in a cursive style with a large, stylized "D" and "M".

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